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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO. |
|--|-------------|----------------------|-----------------------------|------------------|
| 10/663,020   | 09/16/2003  | Harold W. Chase      | YOR919980343US2<br>(12675Z) | 2534             |
| 23389  | 7590        | 02/06/2006           | EXAMINER                    |                  |
| SCULLY SCOTT MURPHY & PRESSER, PC<br>400 GARDEN CITY PLAZA<br>SUITE 300<br>GARDEN CITY, NY 11530 |             |                      | DIMYAN, MAGID Y             |                  |
|  |             |                      | ART UNIT                    | PAPER NUMBER     |
|  |             |                      | 2825                        |                  |

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/663,020

Applicant(s)

CHASE ET AL

Examiner

Magid Y. Dimyan

Art Unit

2825

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9/16/2003 - 12/19/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 2-11 and 31-45 is/are allowed.
- 6) ☐ Claim(s) 1 and 12-14 is/are rejected.
- 7) ☐ Claim(s) 15-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

1. This is with regards to U.S. Application No. 10/663,020, filed 16 September 2003, which is a continuation of U.S. Application No. 09/406,664 filed on 16 September 1999 now abandoned. Claims 1 – 45 are pending in this Application.

### ***Response to Remarks***

2. Applicant's Remarks, filed 16 September 2003 with respect to the rejections of claims 1 - 4, 6 - 8, 10, 12, 31, 32 and 34 - 40 under 35 U.S.C. 102(e) and claims 5, 9, 11, 13 - 30, 33 and 41 - 45 under 35 U.S.C 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, new grounds of objections and rejections are made in view of what is cited below.

### ***Specification***

3. The disclosure is objected to because of the following informalities:

- In the amendment to the specification filed 9/16/2003, page 1, line 5, insert -- , now abandoned-- after "1999".

Appropriate correction is required.

### ***Claim Objections***

4. Claim 1 is objected to because of the following informalities:

- Claim 1, line 3, insert -- and-- after “;”.

5. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 12, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by "Single Electron Switching Events in Nanometer-Scale Si MOSFET's" (IEEE Transactions on Electron Devices, Vol. ED-32, No. 9, Sept. 1985, pp. 1669-1674) to Howard, et al.

8. Referring to claim 1, Howard, et al. teaches a method for characterizing circuit activity in an IC (see Abstract; Section I - Introduction on page 1669; Fig. 2) comprising: activating an IC (see section IV – Experimental on pages 1671 – 1673), generating the switching activity of individual switching events (see also Figs. 4, 5 and 6 which show the switching activity of individual switching events in both space and in time); and generating a representation of the switching behavior which differentiates the time that individual circuits or transistors switch (again see Abstract; Experimental; Figs 4 – 6). Thus, Howard et al. clearly discloses all the claimed limitations.

9. Claim 12 contains the same limitations found in claim 1, and therefore the same rejections also apply.

10. As for claims 13 and 14, see again Figs. 4 – 6 and Section IV on pages 1671 – 1673 which cite the claimed limitations pertaining to the IC design viewer which provide

means to view the measured switching activity spatially and/or temporally, and means for relating the switching devices between the design viewer representations.

### ***Allowable Subject Matter***

11. Claims 15 – 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. Claims 2 – 11 and 31 – 45 are allowed.
13. The following is a statement of reasons for the indication of allowable subject matter: prior art does not teach, or fairly suggest, the additional claimed limitations pertaining to **generating emissions** via the **switching activity** in the region of interest to identify **individual switching events** that can be used to **characterize circuit activity**.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magid Y. Dimyan whose telephone number is (571) 272-1889. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on (571) 272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

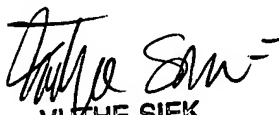
Art Unit: 2825

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Magid Y Dimyan  
Examiner  
Art Unit 2825

myd  
01 February 2006

11-11

  
VUTHE SIEK  
PRIMARY EXAMINER